AMENDMENTS TO THE CLAIMS

In the Claims: Please cancel all original claims and add new claims 1-17.

- 1. A process for analyzing gene function comprising: a) injecting a naked polynucleotide encoding the gene into a blood vessel lumen, *in vivo*; b) increasing the propensity for macromolecules to move through vessel walls and enter the extravascular space; and, c) delivering the naked polynucleotide to an extravascular cell outside of the blood vessel.
- 2. The process of claim 1 wherein the polynucleotide consists of a gene.
- 3. The process of claim 1 wherein the gene encodes a protein.
- 4. A process for analyzing gene function comprising: a) injecting a naked oligonucleotide into a blood vessel lumen, *in vivo*; b) increasing the propensity for macromolecules to move through vessel walls and enter the extravascular space; and, c) delivering the naked oligonucleotide to an extravascular cell outside of the blood vessel via the increased permeability.
- 5. The process of claim 4 wherein the oligonucleotide consists of a single strand oligonucleotide.
- 6. The process of claim 5 wherein the single strand oligonucleotide consists of anti-sense oligonucleotide.
- 7. The process of claim 6 wherein the single strand oligonucleotide consists of an artificial oligonucleotide.
- 8. The process of claim 4 wherein the oligonucleotide consists of double strand nucleic acid.
- 9. The process of claim 8 wherein the double strand oligonucleotide comprises RNA.
- 10. The process of claim 4 wherein delivery of the oligonucleotide to the cell results in decreased expression of the gene.
- 11. The process of claim 9 wherein the double strand oligonucleotide consists of a nucleic acid sequence comprising 10 to 50 bases.
- 12. The process of claim 11 wherein the double strand oligonucleotide consists of a nucleic acid sequence comprising 18 to 25 bases.
- 13. The process of claim 4 wherein the oligonucleotide comprises sequence that is similar to a portion of the gene sequence.
- 14. The process of claim 10 wherein the gene is an endogenous gene.
- 15. The process of claim 15 wherein the gene is a viral gene.
- 16. The process of claim 1 wherein analyzing gene function comprises drug design.
- 17. The process of claim 4 wherein analyzing gene function comprises drug design.

In there are any questions or problems, please contact the undersigned.

Respectfully submitted,

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505 South Rosa Road Madison, WI 53719 608-238-4400 I hereby certify that this correspondence is being sent via Unites States Postal Service express mail to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on this date: August 1, 2003.

Kirk Ekena